

STUDIES IN THE EUPATORIEAE (ASTERACEAE). CXX. ADDITIONS
TO THE GENUS KOANOPHYLLON IN PANAMA.

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The present paper provides some results of the study of the genus Koanophyllon for the Flora of Panama. The studies have shown that three of the four species in the country require taxonomic changes or description. One species is raised from varietal rank where it has been associated with K. hypomalacum (B.L. Robinson) R.M.King & H.Robinson of Guatemala. The Guatemalan species differs by its distinctly puberulous leaves and by its short partly carnosae bracts in the inflorescence. The two new species differ from their relatives by both having densely hirsute young stems and petioles. The two new species can be distinguished from each other by the shape of the involucre bracts and by the number of flowers in the heads.

Koanophyllon wetmorei (B.L.Robinson) R.M.King & H.Robinson, comb. nov. Eupatorium hypomalacum B.L.Robinson var. wetmorei B.L.Robinson, Contr. Gray Herb. n.s. 104: 17. 1934. Panama.

Koanophyllon panamensis R.M.King & H.Robinson, sp. nov.

Plantae frutescentes vel subarborescentes usque ad 6 m altae paucè vel multo ramosae. Caules superficialiter parum carnosè dense evanescentiter hirsuti. Folia opposita saepe aliquantum incrassate petiolata, petiolis 1-3 cm longis; laminæ late vel anguste ellipticae papyraceae vel subcoriaceae plerumque 12-22 cm longae 5-9 cm latae base anguste cuneatae margine serratae vel serrulatae ad apicem anguste breviter acuminatae supra et subtus sparse pilosae vel subglabrae subtus sparse glandulo-punctatae, nervis secundariis pinnatis, nervulis dense reticulatis prominentibus. Inflorescentiae pyramidales, ramis late paniculatis, pedicellis 2-5 mm longis laxè puberulis. Capitula 5-6 mm alta; bractae involucri ca. 20 subimbricate irregulariter inaequales 2-3-seriatae late ovatae vel lanceolatae 3-5-striatae ad apicem argute argute acutae, exteriores ca. 1.5 mm longae margine vix fimbriatae, interiores usque ad 4.0 mm longae deciduae. Flores plerumque 12-20; corollae albae ca. 3 mm longae,

lobis extus paucè glanduliferis. Achaenia 2-3 mm longa plerumque in costis multo breviter setifera raro paucè glandulifera base distincte angustiora, carpopodiis parvis; setae pappi ca. 25-30 dense contiguae incrassatae ad apicem parum angustiores. Grana pollinis perbreviter spinosa.

Type: PANAMA: Cocle: Vicinity of El Valle de Anton, alt. ca. 600 meters, September 17, 1939, P.H.Allen 1997 (Holotype US! Isotype MO!). Paratypes PANAMA: Cocle: El Valle de Anton, D'Arcy & D'Arcy 6733, 6741 (both MO); El Valle, Dwyer 1835 (MO); between Pilon and El Valle de Anton, 700-900 meters, Duke & Dwyer 13953 (MO); Club Compestre, ca. 700 meters, Duke 13257 (FSU, MO). Panama: La Campana, Cerro Campana, Ebinger 933 (MO); Cerro Campana, Croat 12073, 12159 (both MO); Gentry 1826, 5780 (both MO); Cerro Campana, ca. 3000 ft, Dwyer & Kirkbride 7858 (MO); Cerro Campana, 2900 ft, McDaniel 6868 (FSU); Cerro Campana, 2700-3000 ft, Duke 8643 (MO, US); SW facing slopes of Mountains near the town of Chica, R.M.King 5335 (US).

Koanophyllon dukei R.M.King & H.Robinson, sp. nov.

Plantae frutescentes usque ad 2 m ? altae paucè vel multo ramosae. Caules superficialiter parum carnosì dense evanescentiter hirsuti. Folia opposita aliquantum anguste petiolata, petiolis 1-2 cm longis; laminae ellipticae papyraceae 8-16 cm longae 3.3-6.3 cm latae base anguste cuneatae margine argute serratae vel serrulatae ad apicem anguste breviter acuminatae supra et subtus plerumque glabrae subtus sparse glandulo-punctatae, nervis subtus parum puberulis, nervis secundariis pinnatis, nervulis dense reticulatis prominentibus. Inflorescentiae pyramidales, ramis late paniculatis, pedicellis 1-2 mm longis puberulis. Capitula 4-5 mm alta; bractae involucri ca. 15 subimbricatae inaequales 2-3-seriatae late ovatae vel oblongae plerumque 3-striatae ad apicem rotundatae vel obtuse acutae, exteriores ca. 1.5 mm longae margine breviter fimbriatae, interiores 2.5-3.0 mm longae deciduae. Flores 8-10; corollae virid-albae 2.0-2.5 mm longae plerumque glabrae, lobis extus distincte glanduliferis. Achaenia 1.3-2.3 mm longa superne in costis paucè glandulifera vel setifera base angustiora, carpopodiis parvis prominentibus; setae pappi ca. 30 dense contiguae incrassatae ad apicem parum angustiores. Grana pollinis perbreviter spinosa.

Type: PANAMA: Chiriqui: Denuded premontane rain forest between Pinola and Quebrad Seco on Chiriquicito-Caldera Trail, April 21, 1968, Kirkbride & Duke 1038 (Holotype MO!). Paratype PANAMA: Chiriqui: degraded premontane rainforest and Brysoninia savanna between Quebrada Seco nearer Caldera on Chiriquicito-Caldera trail, Kirkbride & Duke 1008 (MO!).

The holotype specimen has involucre bracts reaching only about the length of the mature achenes and has only a few glands on the ribs of the achenes. The paratype specimen has bracts reaching sometimes to the middle of the corolla and has setae on the ribs of the achene. Still, no taxonomic distinction seems justified at this time.

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PLANTS OF PANAMA

Specimens of Koanophyllon dukei R.M. King & H. Robinson, Holotype, Missouri Botanical Garden. Photos by Victor E. Krantz, Staff Photographer, National Museum of Natural History.

Joseph H. Kirkbride Jr. & James A. Duke
No. _____ April 25, 1968
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Koanophyllon dukei R.M.King & H.Robinson,
Holotype, Missouri Botanical Garden. Photos by
Victor E. Krantz, Staff Photographer, National
Museum of Natural History.



Koanophyllon panamensis R.M.King & H.Robinson,
Holotype, United States National Herbarium.



Enlargements of heads of Koanophyllon. Top;
K. dukei. Bottom; K. panamensis.